

CLAIMS

1. A solid electrolyte represented by a general formula:



where M is at least one element selected from the group consisting of Si, B, Ge, Al, C, Ga and S, and a, b, c, d and e respectively satisfy $a = 0.62$ to 4.98 , $b = 0.01$ to 0.99 , $c = 0.01$ to 0.99 , $d = 1.070$ to 3.985 , $e = 0.01$ to 0.50 , and $b+c = 1.0$.

2. The solid electrolyte in accordance with claim 1, wherein said formula satisfies $a = 0.62$ to 2.98 , $b = 0.01$ to 0.99 , $c = 0.01$ to 0.99 , $d = 1.070$ to 3.965 , $e = 0.01$ to 0.50 , and $b+c = 1.0$.

3. The solid electrolyte in accordance with claim 1, wherein said formula satisfies $a = 1.61$ to 2.99 , $b = 0.01$ to 0.99 , $c = 0.01$ to 0.99 , $d = 2.060$ to 3.975 , $e = 0.01$ to 0.50 , and $b+c = 1.0$.

4. The solid electrolyte in accordance with claim 1, wherein said formula satisfies $a = 1.61$ to 2.99 , $b = 0.01$ to 0.99 , $c = 0.01$ to 0.99 , $d = 3.050$ to 3.985 , $e = 0.01$ to 0.50 , and $b+c = 1.0$.

5. The solid electrolyte in accordance with claim 1, wherein said formula satisfies $a = 2.6$ to 3.0 , $b = 0.01$ to 0.99 , $c = 0.01$ to 0.99 , $d = 2.60$ to 3.975 , $e = 0.01$ to 0.50 , and $b+c = 1.0$.

6. The solid electrolyte in accordance with claim 1, wherein said formula satisfies $a = 2.61$ to 3.99 , $b = 0.01$ to 0.99 , $c = 0.01$ to 0.99 , $d = 3.050$ to 3.985 , $e = 0.01$ to 0.50 , and $b+c = 1.0$.

7. The solid electrolyte in accordance with claim 1, wherein said formula satisfies $a = 2.62$ to 4.98 , $b = 0.01$ to 0.99 , $c = 0.01$ to 0.99 , $d = 3.050$ to 3.985 , $e = 0.01$ to 0.50 , and $b+c = 1.0$.

8. An all solid state battery comprising: a positive electrode; a negative electrode; and the solid electrolyte in accordance with claim 1 disposed between said positive electrode and said negative electrode.